

Applicant: Yamaguchi et al.
Application No.: 10/560,730

REMARKS/ARGUMENTS

After the foregoing amendments, claims 1-27 and 29 are currently pending in this application. Claim 28 has been canceled without prejudice. Claims 1 and 2 have been amended to overcome the 35 U.S.C. §112 rejection. In the specification, a number of paragraphs have been amended to cure minor informalities. Applicants submit that no new matter has been introduced into the application by these amendments.

Claim Rejections - 35 U.S.C. §112

Claims 1, 13, 14, 17, 18, 21, 22, 28 and 29 have been rejected as failing to comply with 35 U.S.C. §112. This rejection is respectfully traversed for all of the above claims except for canceled claim 28. It is submitted that the amendment of claim 1 cures this rejection and this rejection should be withdrawn.

Claim Rejections - 35 U.S.C. §101

Claim 28 stands rejected under 35 U.S.C. §101 as not directed to statutory subject matter. Claim 28 having been canceled, this rejection is now moot.

Claim Rejections - 35 U.S.C. §102

Claims 1-29 have been rejected under 35 U.S.C. §102(b) by Arne L. Duwaer (U.S. Patent No. 4,835,602) (hereinafter, "Duwaer"). This rejection is respectfully traversed regarding claims 1-27 and 29, claim 28 having been canceled.

The present invention concerns providing a technique by which portions of an image to be displayed may be obscured by an object. As shown in Fig. 1 of the present application, an image is displayed upon screen 5. Objects 6 obscure portions of the image being displayed on screen 5 from being viewed. A digital

camera 4 captures the image on screen 5, portions of the image being blocked by objects 6 which are positioned between screen 5 and camera 4. In order to display an entire image, including the portions blocked by objects 6, the present invention "fills-in" or "complements" the blocked portions of the image being displayed by utilizing data captured by the camera 4, wherein regions of the image adjacent to and outside of the image part covered by the obstacles 6 are used to complement the blocked image parts to be complemented by using portions of the correction data adjacent to and outside of the area to be complemented. Note, for example, Fig. 11 wherein the block 43 (which may be a pixel) is utilized to complement the adjacent block 42 that is contained within the area to be complemented.

To the contrary, Duwaer is limited to teaching a technique for convergence correction when images of three (3) CRT displays 104, 108 and 112 arranged at different positions relative to one another, as shown in Fig. 1, provides a technique for detecting areas of misconvergence or misgeometry by measurement of luminance reflected from the screen during projection of complementary test patterns that equal luminance in separate image sources.

Due to the spacing required for the CRTs 104, 108 and 112, distortion occurs, producing an image of non-rectangular shape, as shown in Fig. 2. By correcting the convergence, these errors are cured. In addition, Duwaer teaches the ability to reconverge the PTV system at any time which may be required due to shipping or major changes in climate or aging of components, for example.

Due to a convergence being altered, which is the result of temperature, humidity, changes in physical dimensions by dropping or applying vibratory forces to the PTV system, spots or small images from each of the three (3) CRTs are projected onto nine (9) locations. When the color of the sum of these partial images, formed by the three (3) CRTs is white, there is convergence. However, if a spot color

is other than white, readjustment at the location is required. See column 5, line 11-16 of Duwaer.

In the embodiment of Figs. 3 and 4 of Duwaer, there is neither teaching nor remote suggestion of apparatus for complementing an area of an image based on an area excluding and outside of the area to be complemented.

Regarding the Examiner's reference to the embodiment of Fig. 9 of Duwaer, making reference to Figs. 7-9, solid state camera (SSC) 702 measures luminance reflected from the screen 102. As shown in Fig. 9, a checker board pattern is generated by the red CRT 104. A checker board pattern is generated in the green CRT 108 by inverting the checker board pattern generated by the red CRT 104. When these superimposed checker board patterns picked up by camera 702 are properly converged, there is no overlap of the red and green checks. The solid state camera 702 sees constant luminance in these areas. To the contrary, when misconvergence is present, camera 702 sees areas of higher luminance (yellow regions) and dark areas where the colored checks are not continuous. Although the checker board patterns of Duwaer may be complementary to one another, there is nevertheless no teaching or even remote suggestion of correcting an obscured position of an image by employing correction data obtained from a portion of the image outside of the position to be corrected and complementing the portion to be complemented based on correction data relating to the area of the entire image excluding the portion to be complemented. Duwaer uses data obtained from **inside** the area to be corrected, i.e., reconverged, whereas the claimed invention uses only correction data **outside** of the area to be corrected. Duwaer fails to teach or even remotely suggest this capability and it is submitted that claim 1 is patentable over Duwaer. In view of the fact that claims 2-27 and 29 all depend from claim 1 or from

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a claim which is dependent on claim 1, it is submitted that claims 1-27 and 29 patentably distinguish over the art of record.

Based on the arguments presented above, withdrawal of 35 U.S.C. §102(b) rejection of claims 1-27 and 29 is respectfully requested.

Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the present application, including claims 1-27 and 29, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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LW/hg
Enclosure